

**Notice of Allowability**

Application No.

09/995,920

Examiner

Duyen M. Doan

Applicant(s)

LUECKENHOFF, BRUCE ARTHUR

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2152

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/16/2007.
2. ☒ The allowed claim(s) is/are 1,3,4,8-13,18,21,23,24,28-33,38 and 41-44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 4/5/07
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER

### EXAMINER'S AMENDMENT

**Claims 1,3,4,6,8-16,18,21,23-24,26,28-36,38,41-44 are pending.**

**Claims 6,14-16,26,34-36 are cancelled.**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's Agent, Mr. David Rouille, registration number 40,150 on April 5, 2007.

The application has been amended as follows:

Claim 1. (Currently amended) In a beginning tunneling device, a method of communication comprising the steps of:

detecting an initial request at the beginning tunneling device;

identifying the initial request as a candidate to be converted to a tunneling request wherein the identifying further comprises at least one of detecting that a destination address in the initial request is for a destination device associated with an end tunneling device, identifying any initial request received that has a particular source address as being designated to become a tunneling request, and interpreting

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information from an initial header in order to identify that the initial request is intended to be a tunneling request;

modifying at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request, said modifying including specifying a destination code within [the] a tunneling header for at least one of a plurality of destination addresses of destination devices served by an end tunneling device;

wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the specifying comprises steps of: generating a destination code to designate a destination address served by the end tunneling device; and storing the destination code in a fragment offset field of an IP header of the tunneling request;

said modifying further includes setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and forwarding the tunneling request towards the end tunneling device.

Claim 6. (Cancelled)

Claim 12. (Currently amended) In an end tunneling device, a method of communication comprises steps of:

detecting a tunneling request;

identifying the tunneling request as a candidate to be converted to an initial request;

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modifying at least one indicator of a tunneling header in the tunneling request to convert the tunneling request into the initial request;  
said modifying including [setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and specifying a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device]  
obtaining a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device;

wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein the obtaining comprises steps of: reading a destination code from a fragment offset field of an IP header of the tunneling request; and from the destination code, ascertaining the destination address served by the end tunneling device;

replacing an end tunneling address of the end tunneling device in the tunneling header with the destination address to produce an initial header;

said modifying further includes setting an error correction code in the initial header to reflect modifications made to convert tunneling header to the initial header;  
forwarding the initial request toward a destination device.

Claim 14. (Cancelled)

Claim 15 (Cancelled)

Claim 16 (Cancelled)

Claim 21. (Currently amended) A beginning tunneling device for processing initial requests comprising:

a memory;

a communications interface;

a processor; and

an interconnection mechanism coupling the memory, the processor and the communications interface;

wherein the processor is configured to:

detect an initial request at the beginning tunneling device; identify the initial request as a candidate to be converted to a tunneling request, wherein the identifying further comprises at least one of detecting that a destination address in the initial request is for a destination device associated with an end tunneling device, identifying any initial request received that has a particular source address as being designated to become a tunneling request, and interpreting information from an initial header in order to identify that the initial request is intended to be a tunneling request;

modifying at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request, said modifying including specifying a destination code within [the] a tunneling header for at least one of a

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plurality of destination addresses of destination devices served by an end tunneling device;

wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the specifying comprises steps of: generating a destination code to designate a destination address served by the end tunneling device; and storing the destination code in a fragment offset field of an IP header of the tunneling request;

said modifying further includes setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and forwarding the tunneling request towards the end tunneling device.

Claim 26 (Cancelled)

Claim 32. (Currently amended) An end tunneling device for processing tunneling requests comprising:

a memory;

a communications interface;

a processor; and

an interconnection mechanism coupling the memory, the processor and the communications interface;

wherein the processor is configured to:

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detecting a tunneling request;

identifying the tunneling request as a candidate to be converted to an initial request;

modifying at least one indicator of a tunneling header in the tunneling request to convert the tunneling request into the initial request;

said modifying including [setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and specifying a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device] obtaining a destination code within the tunneling header for at least one of a plurality of destination addresses of destination devices served by the end tunneling device;

wherein the tunneling request received by the end tunneling device is in the format of a TCP/IP protocol and wherein the obtaining comprises steps of: reading a destination code from a fragment offset field of an IP header of the tunneling request; and from the destination code, ascertaining the destination address served by the end tunneling device;

replacing an end tunneling address of the end tunneling device in the tunneling header with the destination address to produce an initial header;

said modifying further includes setting an error correction code in the initial header to reflect modifications made to convert tunneling header to the initial header;

forwarding the initial request toward a destination device.

Claim 34. (Cancelled)

Claim 35. (Cancelled)

Claim 36. (Cancelled)

Claim 41. (Currently amended) A computer program product that includes a computer readable medium having instructions stored thereon for conducting communications such that the instructions, when carried out by the computer, cause the computer to perform the steps of:

detecting an initial request;

identifying the initial request as a candidate to be converted to a tunneling request, wherein the identifying further comprises at least one of detecting that a destination address in the initial request is for a destination device associated with an end tunneling device, identifying any initial request received that has a particular source address as being designated to become a tunneling request, and interpreting information from an initial header in order to identify that the initial request is intended to be a tunneling request;

modifying at least one indicator of an initial header in the initial request to convert the initial request into the tunneling request, said modifying including specifying a



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destination code within a tunneling header for at least one of a plurality of destination addresses of destination devices served by an end tunneling device;

wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the specifying comprises steps of: generating a destination code to designate a destination address served by the end tunneling device; and

storing the destination code in a fragment offset field of an IP header of the tunneling request;

said modifying further includes setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and forwarding the tunneling request towards the end tunneling device.

Claim 42. (Currently amended) A beginning tunneling device, for processing initial requests comprising:

a memory;

a communications interface;

a processor;

an interconnection mechanism coupling the memory, the processor and the communications interface;

means, coupled to the communications interface, for detecting an initial request;

means, coupled to the communications interface, for identifying the initial request as a candidate to be converted to a tunneling request,

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wherein the means for identifying further comprises at least one of detecting that a destination address in the initial request is for a destination device associated with an end tunneling device, identifying any initial request received that has a particular source address as being designated to become a tunneling request, and interpreting information from an initial header in order to identify that the initial request is intended to be a tunneling request;

means, coupled to the communications interface, for modifying at least one indicator of an initial header in the initial request to convert the initial request in to the tunneling request, said modifying including specifying a destination code within a tunneling header for at least one of a plurality of destination addresses of destination devices served by an end tunneling device;

wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the specifying comprises steps of: generating a destination code to designate a destination address served by the end tunneling device; and storing the destination code in a fragment offset field of an IP header of the tunneling request;

said modifying further includes setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header and means coupled to the communication interface, for forwarding the tunneling request towards the end tunneling device.

### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

The prior art of record single or in combination failed to teach the combination of the invention as claimed in independent claims 1,12,21,32,41,42.

For example it failed to teach specifying a destination code within a tunneling header for at least one of a plurality of destination addresses of destination devices served by an end tunneling device; wherein the initial request received by the beginning tunneling device is in the format of a TCP/IP protocol and wherein the specifying comprises steps of: generating a destination code to designate a destination address served by the end tunneling device; and storing the destination code in a fragment offset field of an IP header of the tunneling request; said modifying further includes setting an error correction code in the tunneling header to reflect modifications made to convert the initial header to the tunneling header which clearly support by the specification pages 14-19. This feature in light of other features of the independent claims 1, 12,21,32,41,42 enable claims' allowable.

The Dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claims as well as for the further limitations set forth.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

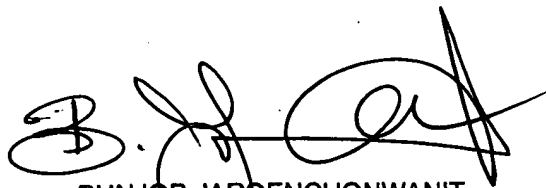
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duyen M. Doan whose telephone number is (571) 272-4226. The examiner can normally be reached on 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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